Fig. 1

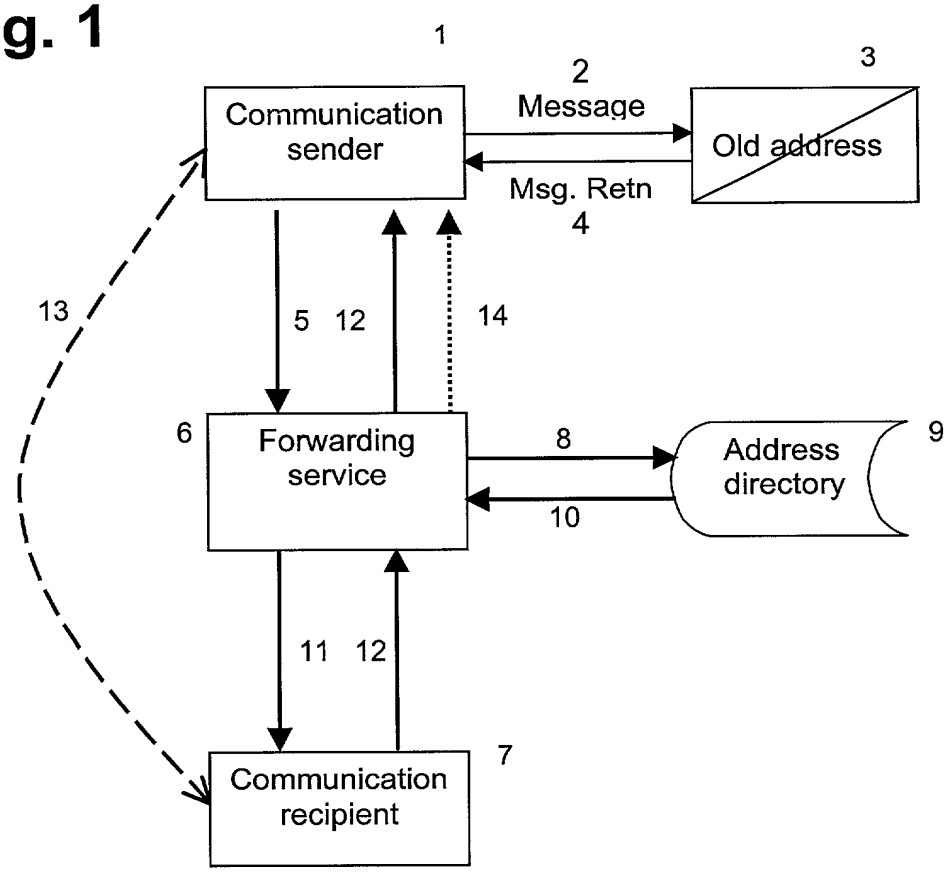

1
2
Message
3
Communication sender
Old address
Msg. Retn
4
13
5
12
14
6
Forwarding service
8
Address directory
9
10
11
12
7
Communication recipient

Fig. 2

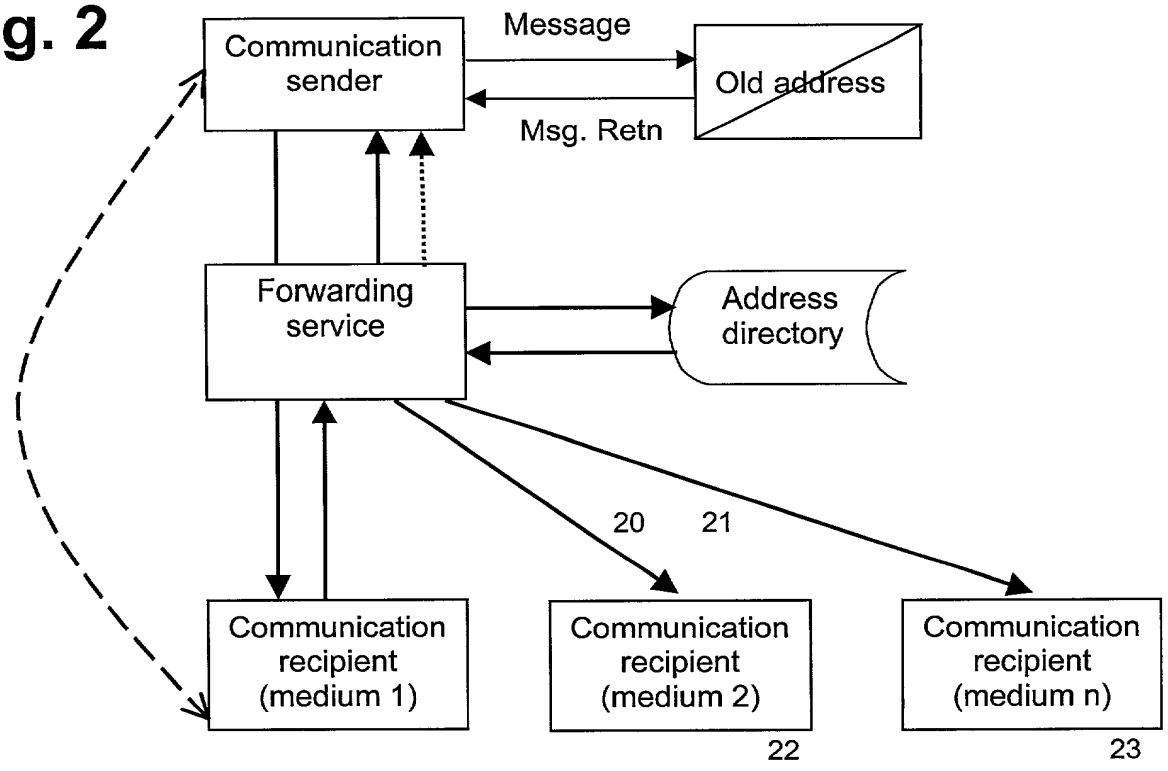

Communication sender
Message
Old address
Msg. Retn
Forwarding service
Address directory
20
21
Communication recipient (medium 1)
Communication recipient (medium 2)
Communication recipient (medium n)
22
23

Fig. 3

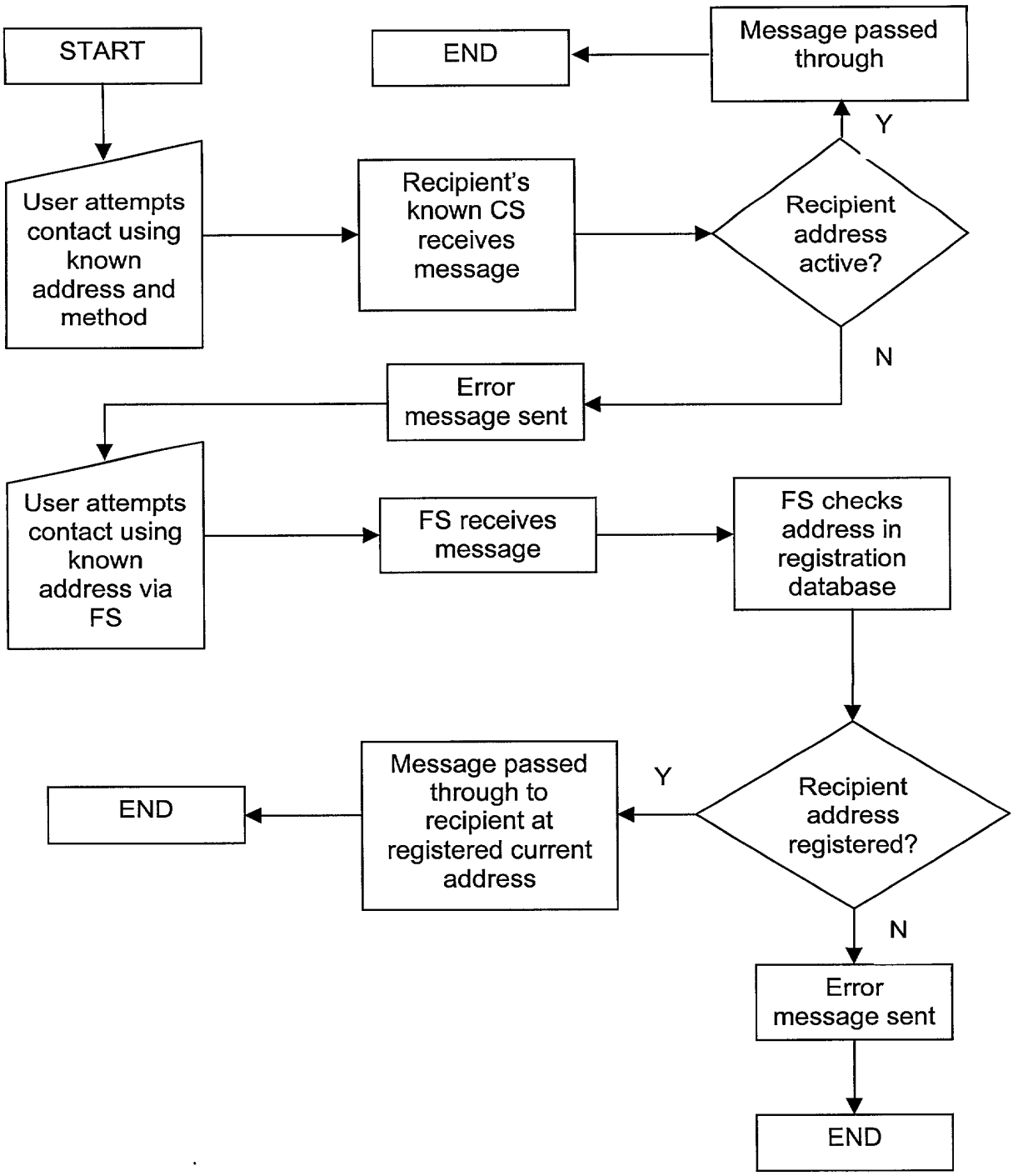
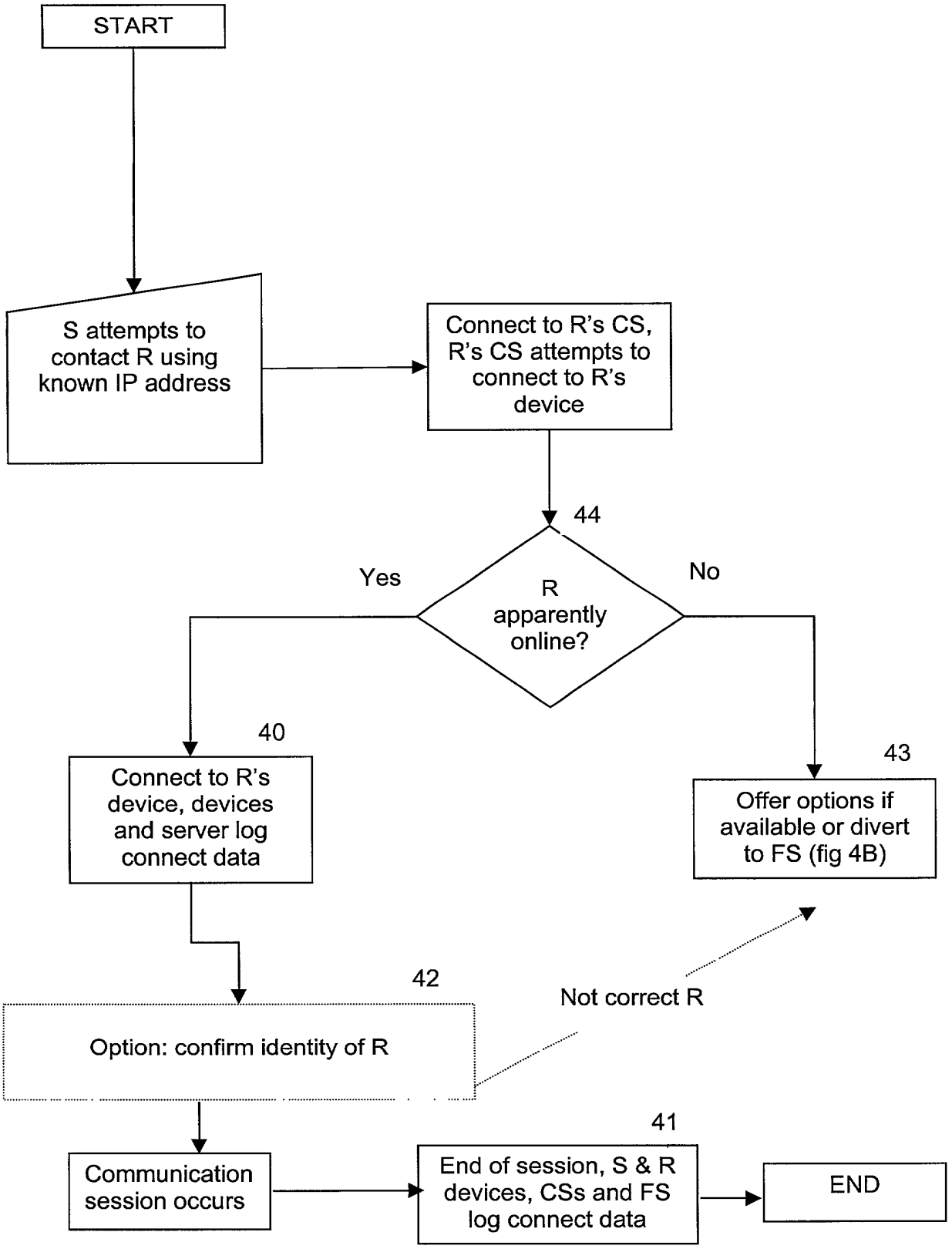

START
User attempts contact using known address and method
Recipient's known CS receives message
Recipient address active?
Y
Message passed through
END
N
Error message sent
User attempts contact using known address via FS
FS receives message
FS checks address in registration database
Recipient address registered?
Y
Message passed through to recipient at registered current address
END
N
Error message sent
END

Fig. 4A


START
S attempts to contact R using known IP address
Connect to R's CS, R's CS attempts to connect to R's device
44
R apparently online?
Yes
No
40
Connect to R's device, devices and server log connect data
43
Offer options if available or divert to FS (fig 4B)
42
Not correct R
Option: confirm identity of R
41
Communication session occurs
End of session, S & R devices, CSs and FS log connect data
END

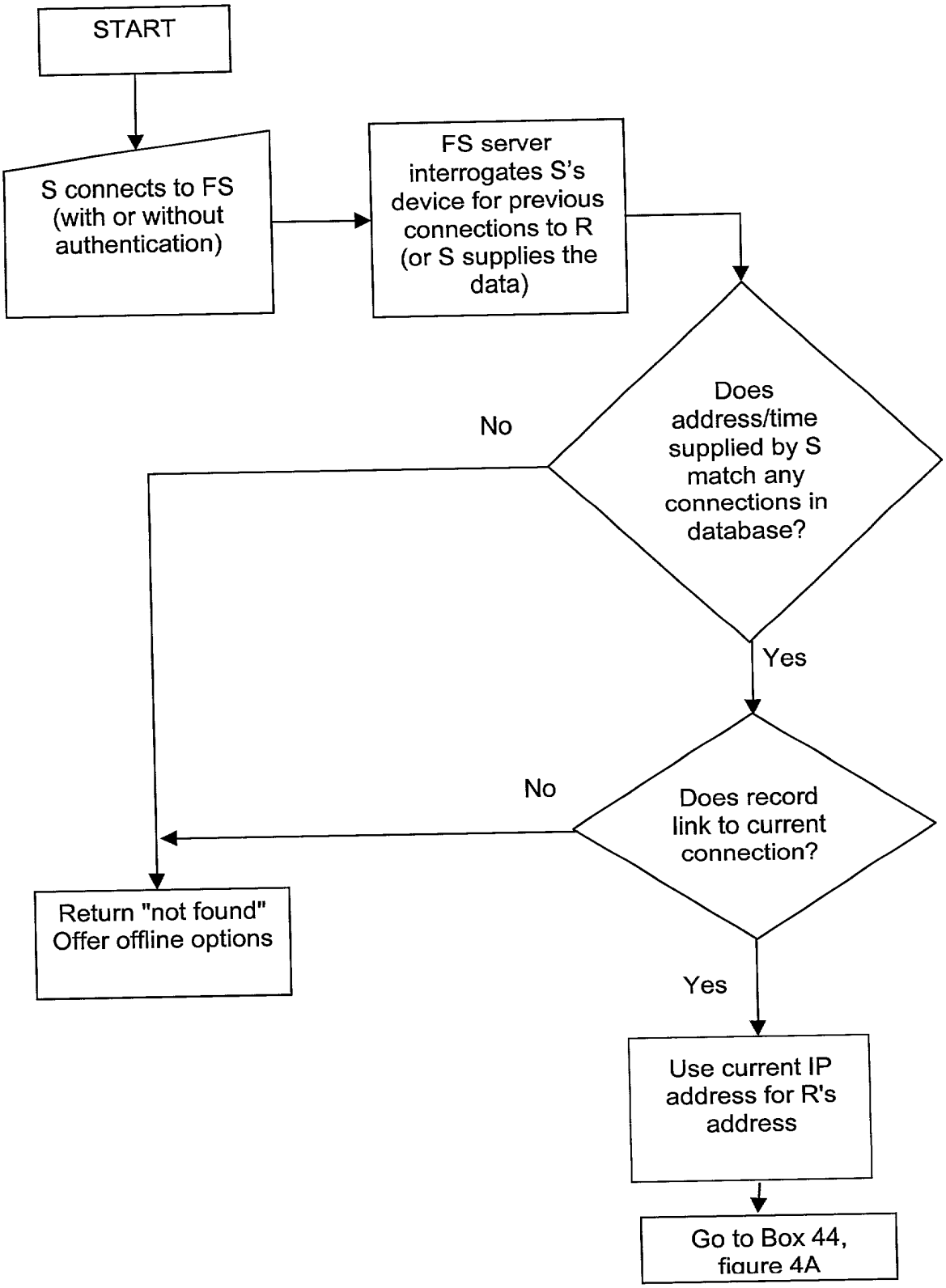

START
S connects to FS (with or without authentication)
FS server interrogates S's device for previous connections to R (or S supplies the data)
Does address/time supplied by S match any connections in database?
No
Yes
Does record link to current connection?
No
Yes
Return "not found" Offer offline options
Use current IP address for R's address
Go to Box 44, figure 4A

Fig. 4B

Fig. 5

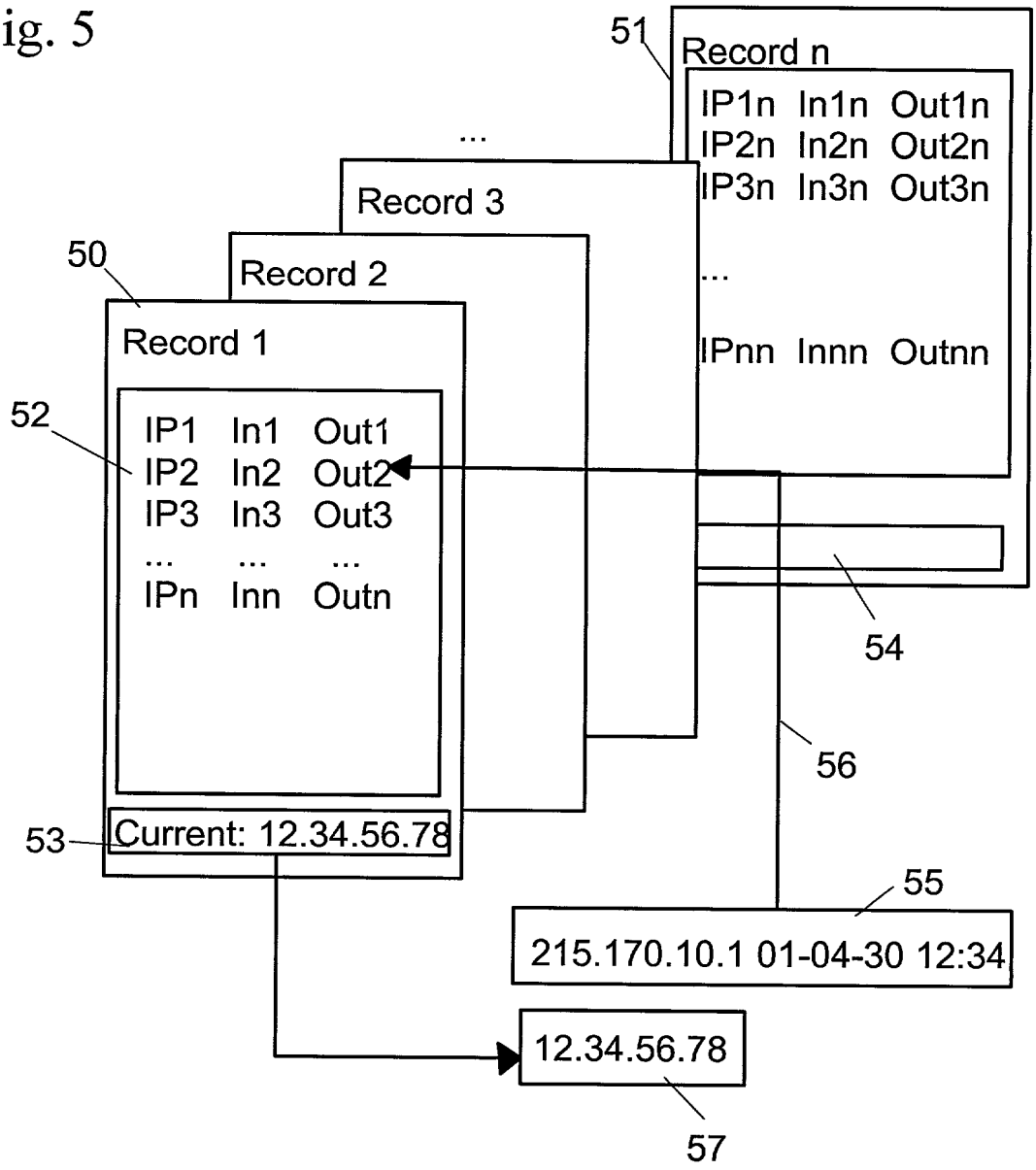
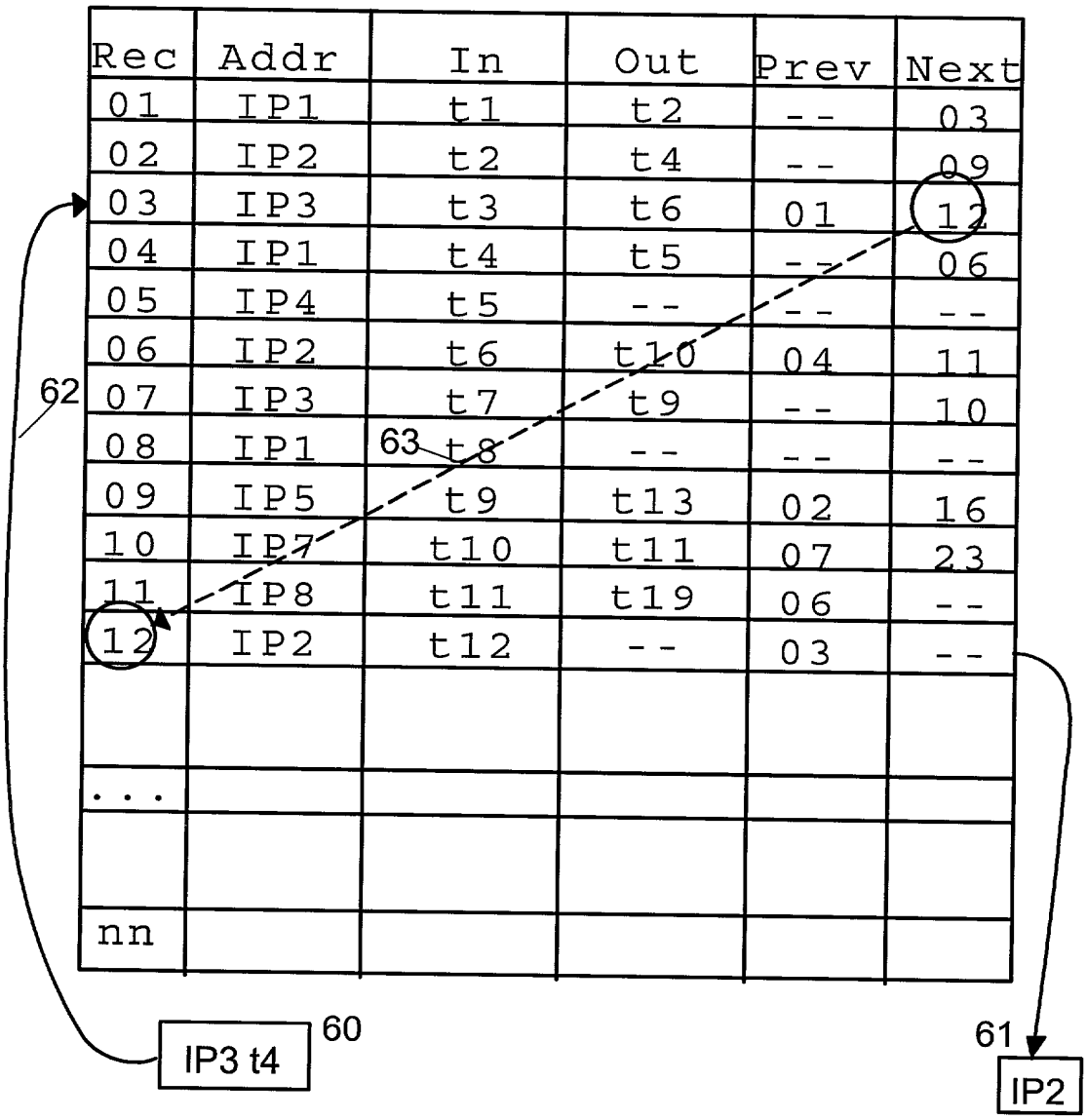

51
Record n
IP1n In1n Out1n
IP2n In2n Out2n
IP3n In3n Out3n
...
IPnn Innn Outnn
...
Record 3
Record 2
50
Record 1
52
IP1 In1 Out1
IP2 In2 Out2
IP3 In3 Out3
... ...
IPn Inn Outn
54
56
53
Current: 12.34.56.78
55
215.170.10.1 01-04-30 12:34
12.34.56.78
57

Fig. 6


Rec
Addr
In
Out
Prev
Next
01 IP1 t1 t2 -- 03
02 IP2 t2 t4 -- 09
03 IP3 t3 t6 01 12
04 IP1 t4 t5 -- 06
05 IP4 t5 -- -- --
06 IP2 t6 t10 04 11
07 IP3 t7 t9 -- 10
08 IP1 t8 -- -- --
09 IP5 t9 t13 02 16
10 IP7 t10 t11 07 23
11 IP8 t11 t19 06 --
12 IP2 t12 -- 03 --
...
nn
62
63
IP3 t4
60
61
IP2